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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,527	06/29/2001	Shmuel Wimer	219.39069X00	2974

7590 06/30/2005

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EXAMINER

CRAIG, DWIN M

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,527

Applicant(s)

WIMER, SHMUEL

Examiner

Dwin M Craig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 17-36 have been presented for Examination. Claims 1-16 have been cancelled.

Response to Arguments

2. Applicant's arguments presented in the 4-18-2005 have been fully considered. The Examiner's response is as follows.

2.1 Regarding the 35 USC § 101 rejections of claims 1-16. The Examiner respectfully notes that the previous rejections as regards the utility of the previously presented claims is moot in view of Applicant's canceling of those claims. The Examiner withdraws the earlier 35 USC § 101 rejections of claims 1-16.

2.2 Regarding the Applicant's response to the 35 USC § 112 rejections of claims 1-16. The Examiner respectfully notes that the previous rejections as regards the clarity of the previously presented claims is moot in view of Applicant's canceling of those claims. The Examiner withdraws the earlier 35 USC § 112 rejections of claims 1-16.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 17-36** are rejected under 35 USC § 101 for failing to claim statutory subject matter. Specifically, Applicant's current claim language is directed towards a *method* of adding legs to a transistor in a source layout. The Examiner notes that a skilled artisan could perform this method with pencil and paper, in other words, the claims are disclosing a recipe for

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designing a circuit layout as opposed to a *computerized* method of designing a circuit layout.

Although the Applicant's could obtain a copyright for the disclosed recipe, much the same as a chief could obtain a copyright for book containing recipes; the chief's recipes would not have utility and therefore not qualify as patentable subject matter.

Taking claim 1 as an example, if the current claim language were amended to say "*A method using a computer comprising: adding legs to a transistor in a source layout to create a re-legged layout that violates design rules; and performing compaction to modify the re-legged layout to comply with design rules.*" This version of Applicant's claims would now be directed towards statutory subject matter and not just towards an abstract formula for re-legging a transistor in a circuit layout.

Allowable Subject Matter

4. Claims 17-36 are allowable. The following is an Examiner's Reasons for Allowance.

4.1 The following limitations, in combination with other limitations are neither anticipated nor made obvious over the prior art. "*adding legs to a transistor in a source layout to create a re-legged layout*" The Examiner notes that this expressly claimed feature is supported by figures 4 item T_{A1-3} and figure 5 item "CR" as disclosed in Applicant's specification. The Examiner notes that even though the prior art discloses checking transistor layouts in a design rules checker for layout violations and performing compaction of a transistor design layout, the prior art fails to disclose, teach or provide a motivation to modify the disclosed teaching of "*adding legs to a transistor in a source layout*", and for this reason the expressly claimed subject matter is novel.

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4.2 The Examiner notes that Applicant's current claim language is not directed towards statutory subject matter please see section 3 of this Office Action.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following U.S. Patents teach the use of compaction and checking a circuit layout with a design rules checker.

US Patent 6,393,601 Tanaka et al.

US Patent 6,006,024 Guruswamy et al.

US Patent 5,987,086 Raman et al.

US Patent 5,984,510 Guruswamy et al.

US Patent 6,209,123 Maziaz et al.

The following IEEE papers teach the use of compaction and checking a circuit layout with a design rules checker.

"An Efficient Building Block Layout Methodology For Compact Placement" by Nickolaos G. Bourbakis and Mohammad Mortazavi.

"Two-Dimensional IC Layout Compaction Based on Topological Design Rule Checking" by John Valaini, Sinan Kaptanoglu, Erwin Liu and Robert Suaya.

"An Efficient Algorithm for Some Multirow Layout Problems", by Lack A. Feldman, Israel A. Wagner and Shmuel Wimer.

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5.1 Claims 17-36 are rejected. This Office Action is **FINAL**.

5.2 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

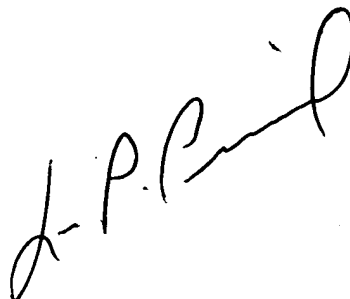
5.3 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC

A handwritten signature in black ink, appearing to read "L. Picard", written diagonally across the page.

**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**